

INNOVATION  
LAB  
ASIA

A GUIDE TO  
THE INNOVATION ECOSYSTEM OF

# CHINA BAY AREA

INDUSTRIENS  
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The Danish Industry Foundation



TECHBBQ

# PREFACE

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This guide gives you a brief introduction to the China Bay Area innovation ecosystem, with a special focus on **Shenzhen**, the hotbed for prototyping and advanced manufacturing, and **Hong Kong**, the historic access point and financial center of the region.

The guide presents the main business opportunities, the most important leads, and most interesting stakeholders, as seen from a Danish perspective. We give you a realistic understanding of the local startup scene based on first-hand experience and on-the-spot dialogues.

This publication has been developed by Asia House and TechBBQ as part of a series of guides to innovation ecosystems in the China Bay Area and Taiwan, India, Japan, Korea, and Singapore.

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# WHY THE CHINA BAY AREA?

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For years, Shenzhen has been known as the global factory hall for electronics, and Hong Kong the traditional gateway to Southern China. Now, the Chinese government is undertaking an ambitious plan to develop the entire region into a new economic powerhouse: Shenzhen is to match the innovation of Silicon Valley while Hong Kong is to cover international transport and finance. The giant city of Guangzhou is to become the area's commercial and industrial engine.

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Danish companies have mainly focused on the Northern and Eastern cities of Beijing, Shanghai, Hangzhou, and Ningbo. However, the China Bay Area - especially Shenzhen - offers great opportunities within prototyping and manufacturing. In fact, a fair number of Danish companies are actively using the area's manufacturing ecosystem, though they do not have a permanent presence.

Additionally, local investors in the China Bay Area are actively looking for the next generation of strong startups, and many are looking into foreign companies in particular. The public sector is also actively seeking to attract foreign startups to the region, to realize the ambitious plans of the Chinese government.

With the ongoing trade war between the US and China, Chinese businesses are increasingly looking for collaborations with Europe, and Danish companies could take advantage of this window of opportunity.

## THE CHINA BAY AREA

- China Bay Area is also known as the Pearl River Delta and covers an area a little less than Denmark
- The Bay Area has more than 70 million people (2017), making it the largest urban area in the world in size and population
- The Bay Area accounts for 12% of China's GDP and includes the cities of Shenzhen, Guangzhou, Dongguan, Foshan, Hong Kong, and Macao
- The Bay Area has three of the world's top 10 container ports
- The Bay Area has more freight traffic than Tokyo, New York, and the San Francisco Bay Area combined





# MAIN ECOSYSTEM OVERVIEW

## CHENGDU

- Chengdu is the international hub of Western China and has a rapidly growing ecosystem. Designated a Hi-Tech Industrial Development Zone by the Chinese government, the city's startup ecosystem sees plenty of support from the public sector.

## BEIJING

- Beijing is probably China's most developed innovation ecosystem and has given birth to 29 unicorns since 2012, the highest number outside Silicon Valley. Beijing is particularly strong in ICT, AI, and Big Data. The proximity of the central government is an added value.

## SHANGHAI

- Shanghai is China's financial center and most internationalized city, with 250,000 expats. By extension, it has China's most demanding and sophisticated consumer base, making it the ideal spot to locate for foreign companies with high-end products. The Shanghai ecosystem is particularly strong in Fintech, Gaming and E-commerce.

## SHENZHEN

- Shenzhen is one of the fastest growing innovation hubs in the world. Long famed as the global hub for hardware manufacturing, Shenzhen has evolved into a vibrant startup community and a great place for hardware prototyping. Proximity to the giant city of Guangzhou and the gateway city of Hong Kong adds to the appeal.

## HONG KONG

- Hong Kong is the historic gateway to South China, and one of the world's leading financial centers. A high proportion of expats and a small domestic market has paved the way for a strong international outlook. Fintech and E-commerce are the two most prominent sectors.



# SHENZHEN

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## THE ECOSYSTEM AT A GLANCE

40 years ago, Shenzhen was no more than a collection of sleepy fishing villages overshadowed by wealthy Hong Kong. Today it is a global powerhouse for hardware manufacturing, with a skyline that (nearly) rivals Hong Kong

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The startup ecosystem in Shenzhen is characterized by a “maker culture”, with a multitude of small, agile makerspaces for rapid prototyping and product optimization. In Europe it may cost 20 euros and take 1-2 days to assemble a basic PCB (printed circuit board); the same device can be made in Shenzhen in 20 minutes for less than 1 euro.



## A LITTLE BIT OF HISTORY

In 1980, Shenzhen became China's first Special Economic Zone, a free market laboratory in a communist country, where foreign investments and entrepreneurship was encouraged. Shenzhen was to become a prototype for economic and urban reform in China. Perhaps this explains that special Shenzhen-vibe, where pragmatic regulations and an international outlook is the norm.

Naturally, the startup scene is rather hardware focused. Most of the successful local startups revolve around "remixing", adding or altering features of existing products. The presence of unicorns Tencent, Huawei, and DJI also shapes the ecosystem, much like Google and Facebook have done for Silicon Valley. They support the local ecosystem, acquire many startups, and entrepreneurs aspire to make products with the goal of partnering with one of the giants.

Shenzhen is also characterized by strong funding opportunities. It is part of a special free trade zone that provides extra support for foreign businesses and gives startups access to venture capital from government funding schemes and private investors. The city is home to 30% of all Chinese VCs and just around the corner (literally two train stops away) lies Hong Kong, one of Asia's main financial centers, and China's historical window to the world.



## THREE WORDS OF REASON

- The level of English spoken is still higher in Hong Kong.
- Many co-working spaces and "startup support" businesses don't really offer support. They're just fronts for getting subsidies.
- Many so-called "incubators" are nothing but empty coworking spaces with a couple of 3D printers.





## MAIN LEADS

Rapid prototyping and manufacturing are the great attractions of Shenzhen for Danish early stage startups. However, the rapid pace of things only benefits the entrepreneurs who already have connections in place and know where to go. In this section, we highlight three leads on-site in Shenzhen with strong connections to the Nordics specialized in helping early stage startups.

- **Troublemaker** is a makerspace that was founded three years ago by four European expats in Shenzhen. Companies pay a membership fee to get access to the workspace, which has everything you might need to hack a basic prototype, including CNC machines and 3D printers. The space is affiliated with a few factories for those who are ready for manufacturing. Troublemaker is also an anchor for the international startup community in Shenzhen, hosting numerous events and workshops, and provides consultancy services to companies looking to, for example, set up local companies or access Chinese public grants.
- **HAX** is the world's first and largest hardware accelerator, with a competitive 2-stage program that begins with prototyping in Shenzhen and ends in San Francisco, where companies are expected to work on business development, fundraising, and growth. They accept companies on a rolling basis, who will typically spend between 4-6 months prototyping in Shenzhen before moving onto the next phase.

- **nHack** is a Nordic Venture Fund and accelerator headquartered in Shenzhen that invests seed capital into Nordic tech scale-ups with upstream production or downstream market acceleration potentials in China and Asia. nHack typically assists Nordic companies in connecting to the right local partners within rapid prototyping, product value engineering, sourcing, and manufacturing. nHack's team also assists with contract negotiations, supervision and quality control before product distribution in China or globally, allowing the startups to benefit from the Shenzhen hardware ecosystem without having to establish a presence in China.

## A FEW FACTS ON SHENZHEN

- Shenzhen is the youngest city in China, with an average age per resident below 30 years.
- Shenzhen has the highest population of migrants in China.
- ... as a result, Shenzhen is almost empty during Chinese New Year, as most residents travel home to their families.
- Foxconn, the world's largest producer of electronics, has its largest factory in Shenzhen, where 250,000 employees (some say 450,000) assemble iPhones and Kindle devices around the clock.
- 90% of the world's electronics are manufactured in Shenzhen, including cell phones and TVs.
- Shenzhen ranks amongst the top 12 upcoming ecosystems (Startup Genome 2019).
- Shenzhen is the first city in the world with an all electric bus fleet. Taxis will soon follow.
- On the soft side, Shenzhen has the highest number of gardens per capita in China, and its mountains and beaches are popular hangouts.





## OTHER LEADS

Innovation Lab Asia has established contacts with several interesting organizations in Shenzhen that might prove relevant for Danish startups. We can facilitate further contact if needed.

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- **Startup Grind** is an international startup event with an active chapter in Shenzhen that has been running for over 5 years. Hosting both online and offline events, Startup Grind is one of the top ways to meet people working in the startup ecosystem in Shenzhen.
  - **Tech Temple** Tech Temple is a co-working space that offers consultancy services for early stage startups. The space hosts many startup community events and has a high amount of software startups and local entrepreneurs as well as many foreign companies. Every May, they host the Global Entrepreneur Open Platform Summit, which helps international companies connect with services that can help them scale into China.
  - **Brinc** Brinc is a reputable hardware accelerator that fosters startups through the prototyping phase and helps scale companies into China and the Middle East.
  - **SLUSH Shenzhen** held its first event in Shenzhen in August 2019, in collaboration with Intebridge. More than 2,500 tech-savvy experts from corporations, investment agencies, startups, and media will gather in the Pingshan High-tech Zone to discuss various topics related to the startup ecosystem including Medtech, Smart manufacturing, and Greentech.
  - **UNLEASH** is a global innovation lab event, which gathers selected attendees in Shenzhen to collaborate on tangible solutions to meet the UN Sustainable Development Goals. The event covers all travel expenses for those who are accepted and is geared specifically at young entrepreneurs, people thinking of launching a company, and top academics interested in entrepreneurship. The application portal for the 2020 iteration opens in March.





## OTHER GATEWAYS & ACCESS POINTS

- **Startup Salad** is an international organization that acts as an “innovation center” in each of their chapter cities, and they are extremely active in the Asian region. Their primary event is a 52-hour hackathon with combined innovation activities and innovation courses. Though they do not invest or incubate projects, they help serve a lot of “wannabe entrepreneurs” looking to test their ideas before making the jump into starting a company.
- **Startup Weekend** forms part of a global event series with a chapter in Shenzhen. Startup Weekend mainly focuses on connecting novice entrepreneurs with mentors from the startup community. The event is supported by Techstars, who help source mentors.
- **InteBridge** is a government agency focused on bringing overseas companies to Shenzhen. They host the office of the China Europe Innovation Center, and organize numerous events and startup competitions that have both local and international participants. For entrepreneurs landing in Shenzhen from abroad, they can provide free services helping companies get information about China’s business policies.





# STRONGHOLDS & OPPORTUNITIES

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Shenzhen is often called the “Silicon Valley of hardware”. There’s hardly an electronic component that can’t be acquired here rapidly, and as a center for mass production, Shenzhen is unrivaled. Hardware production is therefore Shenzhen’s absolute major stronghold, and is the focus of this report.

In doing so, we disregard the numerous other opportunities that exist in the China Bay Area, both in terms of funding and market access.

However, startups going to Shenzhen to access a cheap and rapid prototyping ecosystem may find reasons to continue to engage with the region as a springboard for growth both in China and globally. Shenzhen can be seen as a path not just for product prototyping and iteration, but as the first step in a complete global manufacturing setup.



## HARDWARE MANUFACTURING

- Shenzhen's interstellar growth within hardware manufacturing builds on long term planning by the Chinese government and tremendous support from the public sector.
- The biggest attribute of Shenzhen's hardware industry is perhaps its unparalleled speed in moving from blueprint to product. The manufacturing processes are extremely efficient and optimized to accommodate all types of electronic hardware. Add to this a great deal of flexibility, start-ups have a fast and cheap way to test and modify their hardware.
- Shenzhen has a favorable location in terms of its hardware industry. There are several satellite cities within a few hours' drive that each specialize in supplying certain components and raw materials quickly and at a low cost. In total, there are more than 500,000 individual component manufacturers in the supply chain of Shenzhen.
- The hardware industry of Shenzhen has an endless range of subsectors. Some of the strongest and most famous include Drones, Robotics, Wearables and Advanced Manufacturing but perhaps the all-encompassing nature of the sector is more telling than highlighting the specific sub-sectors.
- In recent years, Shenzhen's hardware industry has shifted its focus. Home to some of the world's largest tech companies, product and manufacturing innovation is a major priority. Products are now also being designed locally with some of the most advanced manufacturing technology to be found in the world.

### THE CONCEPT OF SHANZHAI

- Shanzhai refers to counterfeit consumer goods, including imitation and trademark infringing brands, particularly within electronics
- Shanzhai literally means "mountain stronghold" and refers to regional warlords or living outside official control
- Producing low-cost imitations was the original driver behind the tech ecosystem of Shenzhen, and the culture lingers on
- A more positive version of Shanzhai is "open innovation", where the maker's community actively modifies and improves inventions by others





# HONG KONG

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## THE HISTORIC ACCESS POINT

Hong Kong is the historic bridge between China and Europe, and a key access point to other Asian markets. Many European companies prefer locating here rather than mainland China, as it's often considered a safer and more transparent location from which to access the Chinese market.

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Hong Kong has excellent infrastructure and fast internet, and you can register as a limited entity and open a bank account remotely. Perhaps most importantly, Hong Kong has a legal system that partially originates from the English legal system, making it easier for foreign companies to navigate. IPR is also considered stronger than in mainland China.

However, the Chinese government is increasingly providing effective IP protections, and many concerns raised by foreign companies have now been addressed through new legal reforms, leading to a growing number of foreign companies opting for Shanghai over Hong Kong.

From a cultural point of view, Hong Kong may seem more familiar than mainland China. There is a high number of expats living in Hong Kong, and most people speak English. In fact, the local startup ecosystem in Hong Kong is mostly driven by foreigners, many of whom have chosen Hong Kong as a market access base, or as a logistical hub for shipping or E-commerce.

Being a financial center, there is no shortage of funding in Hong Kong, but HNW (High Net Worth) individuals here still prefer traditional investments, and there is less VC capital available here than in Singapore. Nonetheless, in 2019, Startup Genome ranked Hong Kong as one of the best emerging startup ecosystems.



### A SHORT NOTE ON IPR

- China has a reputation for weak IPR, but there is reason for optimism. China is becoming a global innovator and is now more interested in protecting IP for both domestic and local entrepreneurs. Also, a bad reputation within IPR has made it harder for China to attract talented foreign entrepreneurs. Chinese IP laws are improving, with new enforcement mechanisms available to foreign companies.

## LEADS IN HONG KONG

There are many respected global accelerators, incubators and VCs based in HK, including 500 Startups, Betatron, and Techstars. This section introduces two important stakeholders.

- **The Nordic Innovation House Hong Kong** provides workspace, knowledge, and network to the entire China Bay Area, and can connect you to relevant ecosystem stakeholders. The house also helps make tailor-made programs for visiting companies. Membership is open to startups at any stage from all Nordic countries and costs approximately USD 130.
- **StartmeupHK (InvestHK)** offers free advice and services to support companies planning to land in Hong Kong even at early stages, and works as a portal for startup events, grants, and other business services. StartmeupHK is a publicly funded initiative, and meant to be a one-stop-shop for startups landing in Hong Kong.



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